# Opentel ODC7200CPVR

# Are You Ready for High Class Digital Cable TV?

**When we say** "Digital TV", we usually mean "Satellite Digital TV". However, these days the traditional, terrestrial, analogue TV is rapidly being converted to digital mode in more and more countries. And so is cable TV. If you live in an area where cable TV is popular, chances are that your cable operator is already considering switching to digital.

What does it mean for you, the subscriber? You will have to add a cable set-top-box between a cable jack in your wall and the TV-set. Is such a receiver similar to a satellite box that you are familiar with? Yes, it is, but there are some differences. What are these? Read a separate article in this issue of TELE-satellite that deals with this topic.

Generally, the TSI team does not test cable TV receivers, but this time, we made an exception. Why? We thought that many of you, dear readers, would like to have some orientation about the subject when your cable network operator starts offering you digital boxes. Manufacturers of digital TV receivers offer their products in various versions. They may differ in embedded CAS or the number of CI slots. Moreover, many of them offer differing front-ends to their boxes: satellite, terrestrial or cable. In such cases, they have the appropriate type of RF tuners and demodulators and their software is adjusted accordingly. This is also true for Opentech, the manufacturer of the Opentel ODC7200CPVR.

At first glance, it is hard to distinguish the Opentel 7000 family of receivers from the 4000 family. All models use the same, silver colour, casings. Why change something that is still very elegant and modern? The front panel has a hemispherical, smoked-glass window, behind which a 4-digit display is mounted. The display is green and, as usually, shows either the channel number or the present time. Four crescent-shaped buttons placed around it, allow you to switch channels and adjust audio volume. The fifth button on the left toggles the receiver between the operating and standby modes. Only by the printing on the front panel flap, can you tell that you have the Opentel ODC 7200C PVR – the member of 7000 family. This flap, when opened, reveals two slots for smart cards. The Opentel ODC7200CPVR does not have a CI slot. As you have most likely already deduced from its name, the receiver has a built-in HDD. A look at its rear panel reveals that it also has two tuners. Next to their inputs and outputs, are the TV antenna input and modulator output. All these inputs and outputs use IEC-169 connectors. As expected, there are two Scart connectors and a set of three RCA sockets to connect a TV-set or a VCR that is not compatible with Scart. Home theatre owners will be happy to discover S/PDIF output with digital audio. And the list is completed by the two computer-related ports: RS-232 and USB 2.0. They are used for software upgrade, programming one receiver from another and, of course, for file transfers between the receiver and a PC. Workmanship of the box is very good.

As does the receiver itself, its remote control design deserves a compliment. It is elegant, lightweight and sits nicely in hand. The only thing that can be questioned is the lack of separate volume adjustment and left/right arrow buttons. When you start using the receiver, you are sometimes uncertain, in a particular submenu, whether the left/right arrows will move the focus, execute a function or adjust audio volume.

# Everyday use

On the first power up, you are asked to choose language. The choice is very limited: English, Suomi and Svenska. This, as well as the embedded conditional access system - Conax, clearly identifies the target market of this receiver. Yes, it is Scandinavia. Cable receivers are more often designed for the particular operator rather than for the world or continental market. So, no need to burden it with too many languages.

After selecting the menu language, it is time to set up the channel search. You can do that in two ways: automatically or manually. If you choose the first option, you have to enter the frequency range (by default 110 – 900 MHz), symbol rate and QAM mode (16-, 32-, 64-, 128-, 256-QAM or Auto). Automatic channel search speed is very disappointing. We waited ten minutes during which the scan proceeded from 110 MHz to 172 MHz. If it was to go with the same speed to 860 MHz, it would take two hours! A much more practical way to find the channels is to select the manual channel search. Here, for every multiplex, you enter its center frequency and symbol rate. Luckily, you do not need to specify the QAM mode. It may be set to AUTO. When all data is entered, the actual channel search does not take much time. Due to its nature, you do not expect that many changes in channel database in cable network as in satellite TV. So, you will probably not need to repeat the search too often. The Opentel ODC 7200C PVR had no problem in locking on to and processing low and high bit rate data streams. We tested it with 32-QAM, SR=4000 and 256-QAM, SR=6900. Then we decided to measure its tuner sensitivity and dynamic range. And this is a really good point about this receiver: its specification promises to handle signals from -15 dBmV through to +25 dBmV. We observed that the reception threshold was -19 dBmV, and even +40 dBmV was not too strong signal for the Opentel box (measured as digital channel power). So, the receiver's front end has the dynamics of 60 dB for the 256-QAM – the most demanding mode of modulation. Wow! Please note that it may happen in cable networks that you get too strong signal which is really impossible in normal TV-SAT systems. Some receivers misbehave in such a situation. Just for curiosity, we checked to see if the Opentel ODC 7200C PVR could handle a cable signal complying not with the European but with the US standards. As could be expected from a receiver targeted for a specific region in Europe, the receiver could not lock to a signal modulated in QAM Annex B.

Channel memory can store up to two thousand channels. That should be more than enough for any cable network. After collecting channel data, Opentel ODC 7200C PVR automatically divides them into TV and radio channel lists. The found channels can be put in one of 8 favorite lists, renamed, moved, deleted or locked with PIN if children should not watch them. Channels can be rearranged in every favourite list (you can change their position) and a list itself can be renamed. Channel zapping speed is absolutely acceptable. It is well below one second. Right after a channel zap, an info box is shown at the bottom of a screen. Everything that you need is included in it: channel name and number, program title, short description, start and end time, current channel list name, signal strength and quality bar graphs and a set of icons. The icons indicate: CA status, parental lock status, availability of teletext, availability of subtitles, additional soundtracks and Dolby Digital audio. If we press the Info button when the box is displayed, an additional program description is shown, of course assuming that this data is included in the incoming data stream.

An electronic program guide (EPG) is available in two modes: grid navigator showing a few neighbouring channels on the timescale or a single channel programme list. It is fast and well designed. All information that you may need is either displayed right from the beginning or after just a single button press. As in every other menu, help is also shown at the bottom of screen explaining each buttons' function. You can select programmes for recording directly from EPG. Such booking is called „a reservation". If you just want a pop-up to be displayed at the beginning of your favourite program, you should book "a reminder". The model delivered to us for testing had a large hard disk (120 GB). It is really quiet. If you like to listen quietly to music before you fall asleep, this receiver will suit you. The very near-silent hard disk and a sleep timer activated with a single button press will do the trick.

The Opentel ODC 7200C PVR enables you to watch one channel while recording up to three others. Unlike satellite PVR's, in cable TV, when you connect tuner A output to tuner B input, you have a total freedom in choosing which channel you want to watch and which to record. Of course, when you want to break a world record in concurrent recordings, you must take into account that there are only 2 tuners. So all the channels: the one you watch and the ones you want to record must be transmitted in no more than two digital channels (in TV-Sat, we would call them: two transponders). When playing back the recordings, except for the fast forward and rewind functions you also have 3-second jumps forward and backward as well as slow motion and pause functions available. You can add bookmarks to the most interesting moments. You can zoom to a fragment of the screen, no matter whether moving or paused, coming from the live broadcast or from playback. If you prefer, instead of storing a full recording, you may just capture a screenshot of your favorite actor or politician.

As with virtually every modern PVR, the Opentel ODC 7200C PVR offers time-shifted programme watching. Forgive us that, at this time, we are not going to describe it in detail. This has been explained many times in many PVR test reports published in TSI magazines. What is not that often found in PVR's, is the Picture-in-picture function. When you activate PIP, you can not only monitor the content of the other channel, but you can zap channels shown in PIP window using dedicated buttons on the remote control and even display a channel list for PIP! Using the USB port you can transfer files between the receiver and your PC. We managed to transfer not only to the audio/video recordings but also to captured screenshots. In the opposite direction can you transfer mp3 files or photographs in jpeg format. Having an Mp3 list as well as mp3 player is really nice. Every time there is nothing interesting to watch on TV, you may start listening to your favorite mp3 files copied from the PC. We checked how the transfer works and had nothing to complain about the transfer itself. However, the recorded audio/video files copied from the Opentel ODC 7200C PVR to our PC had no file name extensions and thus we had a hard time trying to find out how to play them. We tried a number of media players with various codecs installed and achieved only the audio play out without video. Even the audio itself was not smooth though. The user manual mentions only that we can transfer mp3's, jpeg's and screenshots. It says nothing about AV files. If they were not meant to be played on PC (for example, due to copy right issues), it would be better if the receiver did not allow us to transfer them. They could be hidden if this is simpler to implement. We must say here that these recordings, when played back on the receiver, are of excellent quality.

Opentel ODC 7200C PVR performs perfectly in switching audio tracks, outputting digital audio signal, showing teletext and subtitles in every language that is present in the incoming signal. The video output is available in CVBS, RGB or S-Video format (on the Scart connectors). Should this model be used outside Europe where Scart connectors are not that popular, a separate S-Video output would be nice to have. Audio and video quality leaves nothing to be desired. One may perhaps dream of having YPbPr output. But such output is truly advantageous only if you have HDTV channels in your cable and, of course, if you have high resolution flat panel or rear projection TV-set or monitor.

## Expert conclusion

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**Nearly all features that you may expect in a PVR are present in Opentel ODC 7200C PVR. PIP works very well. The EPG and all the menus are user-friendly, easy to navigate and look nice. Channel switching is really fast. The User Manual is well written and has a lot of pictures.**

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**Slow channel search. Long booting time: 15-20 seconds to see the logo and 20-25 seconds to get audio and video. We could not play the AV files transferred via USB to PC. It could be expected from such high-end product as the Opentel ODC 7200C PVR that its front panel display would show something more than a 4-digit channel number.**

# Opentel ODC7200CPVR

## Twin Tuner FTA + Conax Digital Cable PVR

### TECHNICAL DATA

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|---|---|
| **Manufacturer** | Opentech Inc., Seoul, Korea, www.opentech.co.kr |
| **E-Mail** | overseas_sales@opentech.co.kr |
| **Distributor** | 13F., SJ-Technoville 60-19, Gasan-Dong, Geumcheon-Gu, Seoul, Korea 153-801 |
| **Fax** | +82-2-3397-0685 |
| **Model** | Opentel ODC 7200C PVR |
| **Function** | Twin Tuner FTA+Conax Digital Cable PVR |
| **Channel Memory** | 2000 |
| **Input Frequency** | 60~860 MHz |
| **Symbol rate** | 7 Msps max. |
| **Scart Connectors** | 2 |
| **Video/Stereo Audio Output** | 3 x RCA |
| **Digital Audio Output** | yes (optical) |
| **Color System** | PAL |
| **S-VHS Output** | yes (via Scart Connector) |
| **Modulator** | yes |
| **EPG** | yes |
| **Teletext** | yes |
| **USB 2.0 Connection** | yes |
| **HDD** | 40 GB ~ 2 TB (in the device under test: 120 GB) |
| **Power Supply** | 95 ~ 240 Vac, 50/60 Hz |
| **Power Consumption** | 30W max. |

### TEST RESULT

SATELLITE INTERNATIONAL TELE

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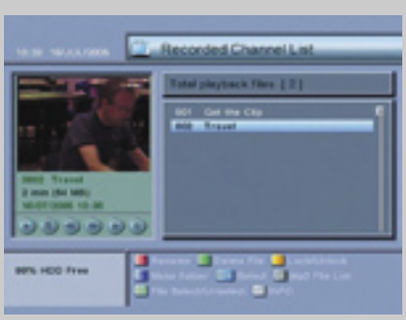
|---|---|
| **Features** | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ☐ ☐ |
| **Channel Memory** | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ☐ ☐ |
| **Channel Scan Speed** | ✓ ✓ ✓ ☐ ☐ ☐ ☐ ☐ ☐ ☐ |
| **Channel Switching Speed** | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ☐ ☐ |
| **Video Quality** | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ☐ ☐ |
| **Audio Quality** | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ☐ |
| **Tuner Sensitivity** | ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ |

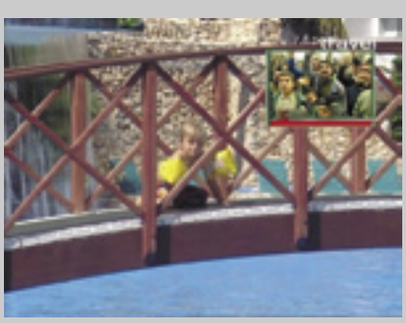
**Channel search**

**Information box**

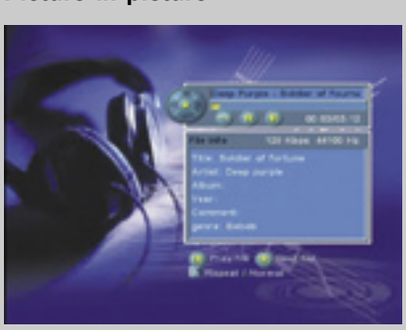
**EPG**



**Recorded channel list**



**Picture-in-picture**



**Mp3 player**